

Public Scoping Document for the Plumas-Eureka Forest Health Project

USDA Forest Service
Beckwourth Ranger District, Plumas National Forest
Plumas County, California

Background

The Forest Service is initiating public scoping on the proposed Plumas-Eureka Forest Health Project (Plumas-Eureka Project). The primary objectives of this project are centered on forest health and public safety. These goals include increasing tree vigor, improving resistance to bark beetle attacks and promoting resilience to drought, wildfire and the potential effects of climate change. Other related goals include: reducing surface fuels; modifying vertical and horizontal fuel arrangement; and re-introducing fire as an ecological process. In addition, implementation of this project would lead to economic benefits of Government and private contracting and the sustainable utilization of renewable resources such as timber and biomass in the production of forest products and energy.

Treatments are proposed on approximately 2,832 acres of National Forest System (NFS) lands (Figure 1). Proposed activities may include: mechanical thinning, hand thinning/hand piling, mastication, grapple piling, chipping of small diameter trees, pile burning, underburning, road maintenance and decommissioning of non-system roads. Approximately 625 acres of the proposed treatment areas are designated as Wildland Urban Interface (WUI) Defense Zone and approximately 2,207 acres allocated as WUI Threat Zone (Figure 2).

The Plumas-Eureka Project is located near Plumas-Eureka State Park approximately 1.5 miles northwest of Graeagle, California on the Beckwourth Ranger District of the Plumas National Forest in Plumas County, California. The project area occupies portions of Township 22 North, Range 11 East, Sections 1 and 12; Township 22 North, Range 12 East, Sections 5, 6, 7, 8, 9, 18 and 19; and Township 23 North, Range 12 East, Sections 30, 31 and 32, Mount Diablo Base Meridian.

The project area is situated within landscape areas designated by the Chief of the Forest Service on November 24, 2015 as part of an insect and disease treatment program in accordance with Title VI, Section 602, of the Healthy Forest Restoration Act (HFRA), as amended by Section 8204 of the Agriculture Act (Farm Bill) of 2014 (Figure 3).

The Plumas-Eureka Project Interdisciplinary Team (IDT), Forest Health Protection (FHP) Entomologist Danny Cluck and FHP Plant Pathologist Bill Woodruff from the Northeastern California Shared Service Area have conducted field surveys of National Forest System (NFS) land in the project area to evaluate existing conditions. This evaluation of the existing condition shows extremely dense mixed conifer stands with elevated levels of tree mortality and high fuel loads.

Collaborative Process

The Forest Service is engaging the public and will be collaborating with interested parties throughout the planning process. As a part of this process, a public field trip to the project area is scheduled for **Tuesday, September 19, 2017** from 9:30 am to 2:00 pm. Meet at 9:30 am at the Beckwourth Ranger District, 23 Mohawk Road, Blairsden, CA 96013. A public notice of the field trip and initiation of the scoping period was published in *The Portola Reporter* on August 30, 2017. Scoping letters and maps were mailed out to 860 potentially interested parties, including local landowners, tribes, and organizations that have expressed interest in similar projects on Tuesday, August 29, 2017. The Forest Service is requesting that comments be received by **October 6, 2017** so that any issues may be identified early in the planning process. The interdisciplinary team will review all comments received.

Purpose and Need

The Forest Service compared broad desired conditions identified in the Plumas National Forest Land and Resource Management Plan (1988) as amended by the Sierra Nevada Forest Plan Record of Decision (SNFPA ROD 2004) with site-specific conditions present in the Plumas-Eureka project area. The primary objectives are to:

1. Improve forest health and resiliency.
2. Improve water quality and hydrological function.

As a result, opportunities were identified to move the landscape toward desired conditions of forest health and resiliency including the retention of large diameter trees, increased vertical and horizontal diversity and a reduction in both surface and aerial fuels. The following discussion of the Plumas-Eureka Project purpose and need for action describes the project rationale in detail.

The proposed treatment areas are primarily Sierra mixed conifer with ponderosa pine (*Pinus ponderosa*), Jeffrey pine (*Pinus jeffreyi*), Douglas-fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*) and white fir (*Abies concolor*). Lower elevation and generally drier areas are dominated by eastside pine stands consisting of ponderosa and Jeffrey pine (Cluck 2016). In addition to conifer species, a few small stands of quaking aspen (*Populus tremuloides*) are located in the project area.

Most of the forested areas within and adjacent to the Plumas-Eureka Project area are in an extremely overstocked condition (Cluck 2016) and occur as even-aged (single story) stands that lack structural diversity with some stands exhibiting uneven-aged characteristics (a range of tree sizes). Table 1 below displays the existing trees per acre (TPA) and basal area per acre (BA/A) within the project area based on diameter class. TPA and BA/A are measures of stand density and can be used to evaluate stand structure.

In drier years, stands have exhibited an elevated level of tree mortality caused by bark beetles. The majority of the project area averages 30 and 60 inches of annual precipitation, putting most conifers at a higher risk of mortality during periods of drought (Cluck 2016). This mortality combined with high stand densities has resulted in heavy fuel loading in some areas and a corresponding increase in fire danger (Cluck 2016). Figure 4 displays areas and numbers of years with mapped tree mortality while Figure 5 displays estimated numbers of dead trees per acre based on aerial surveys.

Table 1. Approximate Trees Per Acre and Basal Area Per Acre within the Project Area Based on Diameter Class.

Forest Product	N/A	Biomass	Sawlog Trees			Reserve Trees	Totals
Tree Size	Seedlings/Sapling Size Trees	Sapling to Pole Size Trees	Small Trees		Medium-Sized Trees	Medium to Large Sized Trees	
Diameter Class (inches)	0 - 2.9	3 - 10.9	11 - 17.9	18 - 23.9	24 - 29.9	30 +	
Trees Per Acre Range	56-506	30-359	0-124	0-33	1-13	0-11	184-1,311
Trees Per Acre Average	303	171	66	22	8	5	575
Basal Area Per Acre Range	0-7	8-72	0-130	0-76	4-59	4-139	101-304
Basal Area Per Acre Average	2	41	72	51	29	36	231

Within these dense stands there is a high degree of competition between trees for nutrients, water, growing space and sunlight. Conifers with limited resources and a high degree of competition often have decreased vigor, especially during drought conditions, which decreases a trees ability to resist insect attack. In addition, the over-crowding and shading out of aspen is resulting in tree mortality and decreased vigor and regeneration of this important wildlife habitat species.

Aspen stands within the Plumas-Eureka Project area are relatively small in size and are being encroached upon or overtopped by conifers, primarily white fir and ponderosa pine. Encroaching

and overtopping conifer trees compete with aspen for water, nutrients, sunlight and growing space. Over time, conifers would create a highly shaded environment, potentially leading to the complete loss of this unique habitat.

Also, multiple unmaintained non-system roads as well as infrequently maintained system roads in the project area may be contributing to a reduction of hydrologic function and water quality attributed to the project area watersheds.

Project Development

A method for reducing tree moisture stress and subsequent bark beetle activity is by reducing stand density with mechanical thinning and prescribed fire (North et al. 2009). Stand density affects tree growth rates and vigor; cover for wildlife; fuels and fire potential and behavior; understory tree, shrub, and herb density; growth and yield of forest products. There is considerable evidence that the susceptibility of a stand to forest insects is related to its density. However, factors such as drought, root disease, mistletoe, and possibly air pollution also are important. Undoubtedly there is considerable interaction among these variables and stand density. During a severe drought the effects of stand density may become paramount (Oliver et al 1996).

Secondly, climate change is expected to enhance aridity and drought severity in forests around the globe. Drought impacts are anticipated to be especially severe in dry forest systems (Bradford and Bell 2017), such as those found in the Plumas-Eureka Project area. Basal area reduction has been shown to effectively increase water availability to residual trees, improving tree resistance and resilience to drought and decreasing mortality rates in experimental settings (Bradford and Bell 2017).

The primary objective of this project is to improve forest health in addition to promoting resilience to drought, wildfire and the potential effects of climate change by reducing high stand densities and increasing forest heterogeneity.

Proposed Action

The Forest Service is proposing to treat approximately 2,832 acres on NFS lands. Proposed actions may include: mechanical thinning, hand thinning/hand piling, mastication, grapple piling, pile burning, underburning, road maintenance and decommissioning of non-system roads.

Also, this project will follow FHP Report #NE16-11, Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region. The hazard tree guidelines provide a means to identify and abate hazard from trees that are likely to fail and cause injury to either people or property on Forest Service system roads or at Forest Service facilities in California. At the very least, all trees within areas of intensive public use should be evaluated. Special attention should be given to trees greater than 8 inches diameter at breast height (DBH), since two-thirds of reported failures occur in trees of this size. A hazard rating will be determined for each inspected tree. Based on the rating either no action, monitoring, or mitigation (tree removal or tree part removal) would occur.

Wildlife

Research of existing wildlife data and field surveys have been conducted for the Plumas-Eureka Project. Based on all available State and Federal data, there are no Threatened or Endangered species. One California spotted owl (CSO) protected activity center (PAC), two CSO home range core areas (HRCAs) and three northern goshawk PACs exist within the Plumas-Eureka Project area (Figure 2). There is also suitable nesting and foraging habitat for both species in the project area. Lastly, one golden eagle territory resides within the Plumas-Eureka Project area. Vegetation treatments would be tailored to improve spotted owl and goshawk habitat as well as other important wildlife habitat components throughout the project area. This may include diameter limits for tree removal, constraints on the timing and locations of underburning, as well as Limited Operating Periods (LOPs) for all management activities. In addition, the project would include design features

that follow Sierra Nevada Forest Plan Amendment (SNFPA) such as retaining trees showing signs of wildlife habitation, retaining some trees greater than or equal to 20-inches diameter at breast height (DBH) that provide structure beneficial for wildlife use, retaining down woody material and snags as well as retaining riparian, deciduous tree, and brush species that benefit wildlife.

Decision Framework

The Plumas-Eureka Project activities are proposed to be categorically excluded from documentation in an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) because there are no anticipated extraordinary circumstances potentially having effects which may significantly affect the environment, and they fit into established categories excluded from documentation in an EA or EIS. The project falls within the scope and intent of the following categorical exclusion categories:

- Section 603 of HFRA (16 U.S.C.6591b). This categorical exclusion may be used to carry out a collaborative restoration project in an insect and disease treatment area designated by the Chief under section 602. The applicable category of actions is identified in agency procedures Forest Service Handbook 1909.15, Chapter 30, Section 32.3 (Categories Established by Statute), #3, Insect and Disease Infestation. This category is applicable because this project would carry out a collaborative restoration project in an insect and disease treatment area designated by the Chief under section 602 where hazard trees pose an imminent risk to public infrastructure, health or safety.
- 36 CFR 220.6 (e)(20). Activities that restore, rehabilitate, or stabilize lands occupied by roads and trails, excluding National Forest System roads and National Forest System trails, to a more natural condition that may include removing, replacing, or modifying drainage structures and ditches, reestablishing vegetation, reshaping natural contours and slopes, reestablishing drainage-ways, or other activities that would restore site productivity and reduce environmental impacts. This category is applicable because this project would decommission non-system roads that are currently affecting hydrologic function.

Requirements of Categorically Excluded Projects under Section 602 and 603 of HFRA

The Plumas-Eureka Project area is within designated landscape areas as authorized as part of an insect and disease treatment program in accordance with Title VI, Section 602, of the Healthy Forest Restoration Act (HFRA), as amended by Section 8204 of the Agriculture Act (Farm Bill) of 2014. To be designated, areas must be:

1. Experiencing declining forest health, based on annual forest health surveys;
2. At risk of experiencing substantially increased tree mortality over the next 15 years due to insect or disease infestation based on the most recent National Insect and Disease Risk Map published by the Forest Service; or
3. In an area in where hazard trees pose an imminent risk to public infrastructure, health or safety.

Insect and disease projects subject to categorical exclusion from preparation of an EA or EIS under Section 603 of HFRA are subject to several qualifying criteria. The Plumas-Eureka Project meets the qualifying criteria under Section 603 of HFRA as described in Table 2.

Table 2. HFRA Section 603 Project Requirements.

Section	HFRA Project Requirement	Compliance Description
Section 603(c)(2)(A)&(B)	Project is located entirely within the wildland urban interface (WUI) or within Condition Classes 2 or 3 in Fire Regime Groups I, II or III	The project area is located entirely within WUI as defined by HFRA with portions within the WUI Defense Zone and Threat Zone*; Condition Class 3; and Fire Regime Group I.**
Section 603(d)(1)-(4)	Project may not be located within designated Wilderness, Wilderness Study Areas, areas where the removal of vegetation is restricted or prohibited, or where activities would be inconsistent with the Forest Plan	The project area is not within designated Wilderness, Wilderness Study Areas, or areas where removal of vegetation is restricted or prohibited or where activities would be inconsistent with the Forest Plan.
Section 603(b)(1)(A)-(C)	Project carries out forest restoration treatments that maximize retention of old-growth and large trees, considers the best available science to maintain or restore ecological integrity, and is developed through a collaborative process.	Healthy large trees greater than 30 inches in diameter are not proposed for harvesting under the project. Best available science has been and will be considered in development of the proposed action and the effects analysis. Development of the project will include a collaborative process with interested individuals and organizations.
Section 603(c)(1)	Project may not exceed 3,000 acres in size	The proposed project would treat up to approximately 2,832 acres.
Section 603(c)(3)	Project may not include the establishment of permanent roads and shall decommission any temporary roads within 3-years of project completion.	No permanent roads will be constructed. Temporary roads will be decommissioned within 3-years of project completion.
Section 603(e)	Project must be consistent with the land and resource management plans	The proposed action is consistent with the Forest Plan.
Section 603(f)	Project is required to have public notice and scoping.	Public notice of the project was published in <i>The Portola Reporter</i> on August 30, 2017 . Scoping comments are being solicited until October 6, 2017 .

* A WUI **Defense Zone** is defined as the buffer (generally ¼ of a mile out from these areas) in closest proximity to communities, areas with higher densities of residences, commercial buildings, and/or administrative sites with facilities. Actual Defense Zone boundaries may be further defined at the project level based on site specific features, topography, fuels, and/or natural barriers. WUI areas outside of the Defense Zone are defined as **Threat Zones**. The Threat Zone was defined by the Plumas Fire Safe Council and Plumas National Forest fire management and leadership.

****Condition Class 3** is defined as land that is the farthest removed from its natural fire interval; **Fire Regime Group I** is associated with East Side Pine stands which have been determined to require frequent low-severity fire return intervals to maintain forest health.

Responsible Official

The Beckwourth District Ranger is the Responsible Official for this proposed action. The responsible official will decide whether to adopt and implement the proposed action or take no action with respect to the Plumas-Eureka Project.

Information Contact

For more information regarding this project, contact Project Leader. Russell Nickerson, at rnickerson@fs.fed.us or by calling (530) 836-7115.

References Cited

- Bradford, J.B., and D.M. Bell. 2017. A Window of Opportunity for Climate Change Adaptation: Easing Tree Mortality by Reducing Forest Basal Area. *Frontiers in Ecological Environments* 15(1):11-17.
- Cluck, D. 2016. Evaluation of Stand Conditions for the Plumas-Eureka Project. FHP Report NE16-11. U.S. Department of Agriculture, Forest Service, Pacific Southwest Region, Northeastern California Shared Service Area, Susanville, CA, 11 pp.
- North, M.; P. Stine; K. O'Hara; W. Zielinski; and S. Stephens. 2009. An ecosystem management strategy for Sierra mixed-conifer forests. Gen. Tech. Rep. PSW-GTR-220. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 49 p.
- Oliver, W. W., G. T. Ferrell, and J. C. Tappeiner. 1996. Density management of Sierra Forests. Sierra Nevada Ecosystem Project: Chapter 11, Final Report to Congress, Volume III. Assessments and scientific basis for management options. University of California, Centers for water and wildland resources, Davis, CA.



Plumas Eureka Forest Health Project

Wildland Urban Interface Zones,
Northern Goshawk PACs, and
California Spotted Owl PACs and HRCAs

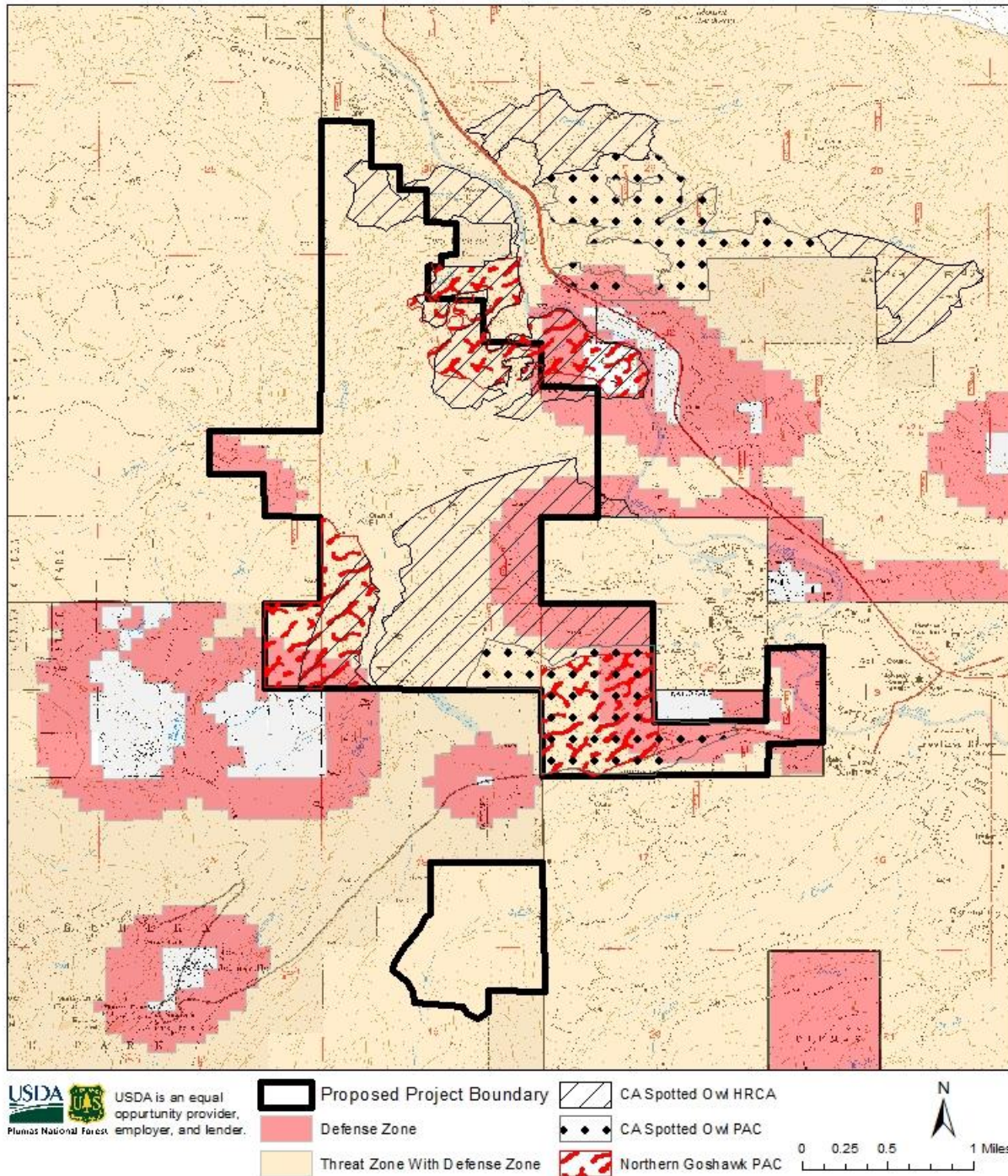


Figure 2. Plumas-Eureka Forest Health Project Land Allocations.

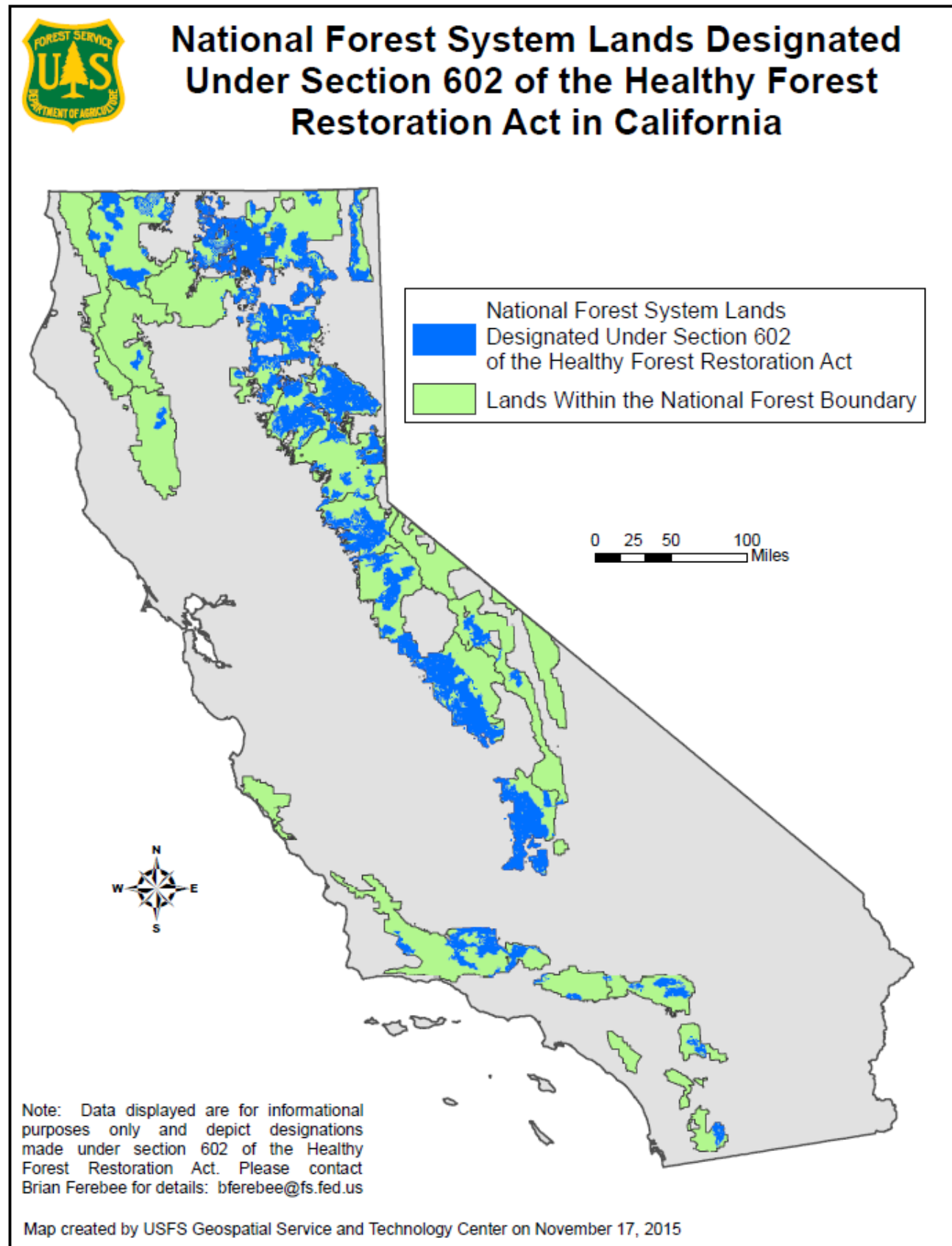


Figure 3. National Forest System Lands Designated Under Section 602 of the Healthy Forests Restoration Act (HFRA) in California.

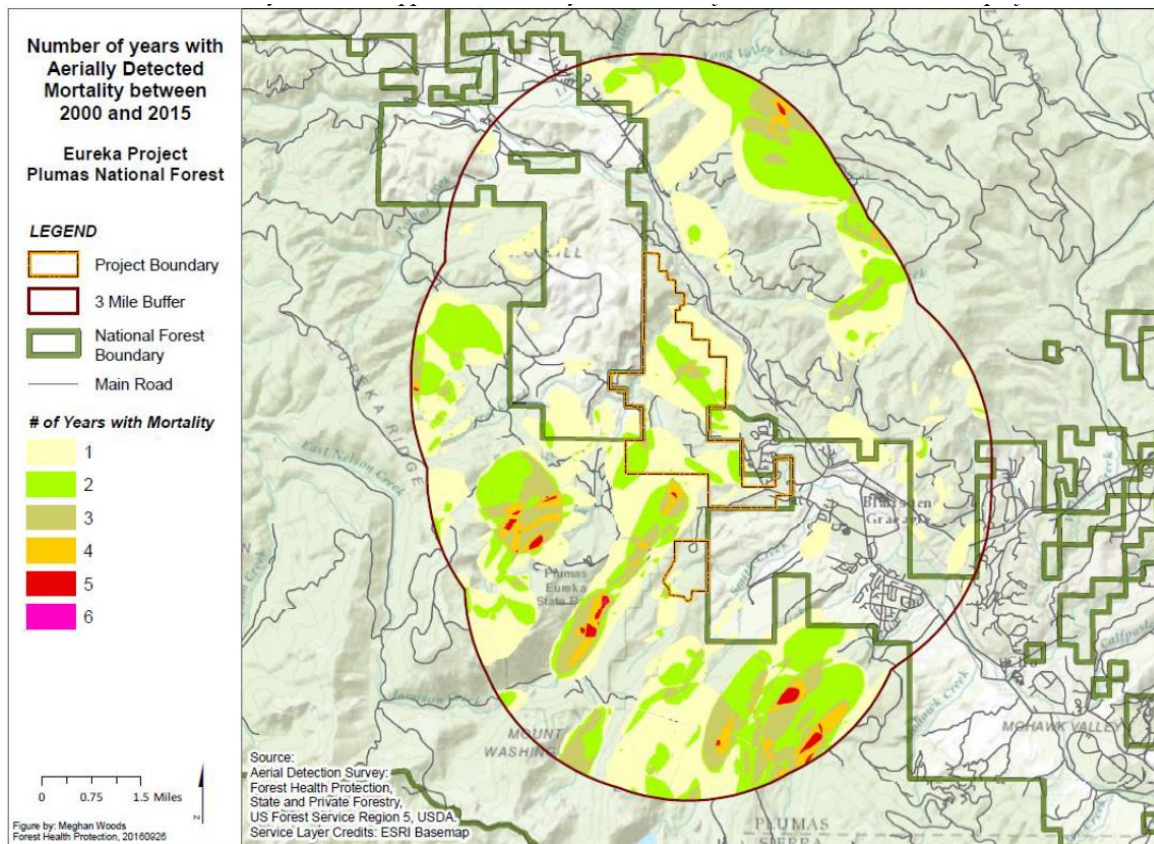


Figure 4. Areas and number of years with mapped tree mortality within and adjacent to the Plumas-Eureka Forest Health Project area (Cluck 2016).

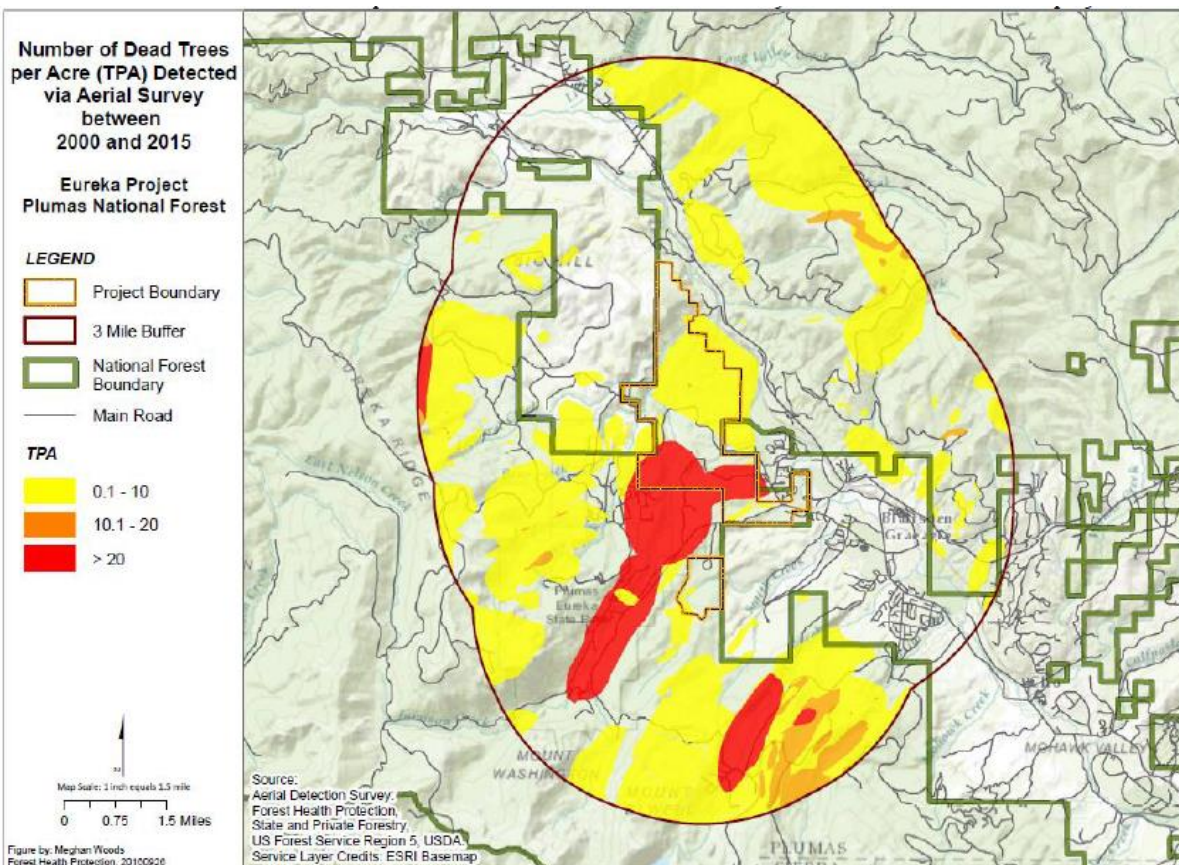


Figure 5. Areas and number of years with mapped tree mortality within and adjacent to the Plumas-Eureka Forest Health Project area (Cluck 2016).